

We claim:

1. An apparatus for performing instant messaging (IM) under a first protocol,
5 said apparatus comprising:
a first device;
a second device implementing a second protocol;
a protocol converter to convert between said first protocol and said second
protocol;
10 a register to register said first device and said second device; and
a map to map a first client to said first device and a second client to said
second device.
2. The apparatus of claim 1 wherein said first protocol is a Session Initiation
15 Protocol (SIP).
3. The apparatus of claim 2 wherein said second protocol is a Computer
Supported Telephony Application (CSTA).
- 20 4. The apparatus of claim 3 wherein said first device is a first protocol device.
5. The apparatus of claim 4 wherein said first device is a Personal Computer
(PC).
- 25 6. The apparatus of claim 4 wherein said first device is a Personal Digital
Assistant (PDA).
7. The apparatus of claim 3 wherein said second device is a digital telephone.
- 30 8. The apparatus of claim 7 wherein said digital telephone is connected through a
telephonic switch.

9. The apparatus of claim 8 wherein said telephonic switch is a Private Branch Exchange (PBX).
10. The apparatus of claim 3 wherein said first device is a second protocol device.
11. The apparatus of claim 10 wherein said first device a digital telephone.
12. The apparatus of claim 11 wherein said digital telephone is connected through a telephonic switch.
13. The apparatus of claim 12 wherein said telephonic switch is a Private Branch Exchange (PBX).
14. A method for supporting Instant Messaging (IM) in digital telephones, comprising the steps of:
- registering a first protocol digital telephone set;
 - converting said first protocol to a second protocol;
 - mapping a client to said digital telephone set; and
 - communicating an instant message to or from said digital telephone set.
15. The method of claim 14 further comprising the steps of:
- registering a second device; wherein said mapping step further maps a second client to said second device and said communicating step further includes communicating an instant message between said first digital telephone set and said second device.
16. The method of claim 15 wherein said second device is a personal computer (PC); and wherein said mapping step further maps a second client to said PC and said communicating step further includes communicating an instant message between said first digital telephone set and said PC.
17. The method of claim 15 wherein said second device is a first protocol digital telephone set; and wherein said converting step also converts said first protocol device

to said second protocol device, said mapping step further maps a second client to said second digital telephone set and said communicating step further includes communicating an instant message between said first and said second digital telephone sets.

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18. A method according to claim 14 further comprising the step of configuring an Instant Messaging (IM) key for a digital telephone set.

19. A method according to claim 18 further comprising the step of establishing the IM connection by pressing said instant messaging key.

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20. A method according to claim 14 further comprising the step of sending a notification to said digital telephone set when a new instant message arrives.

21. A method according to claim 14 wherein said step of communicating is accomplished while the digital telephone set is off-hook.

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22. A method according to claim 14 wherein said step of communicating includes composing and displaying instant messages using the standard key buttons and display space of said digital telephone set.

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23. A method according to claim 14 wherein said step of communicating includes sending a notification to said digital telephone set when a request to add said digital telephone set client to the contact list of another instant messaging client is received.

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24. A method according to claim 14 wherein said step of communicating includes using said digital telephone set to sign-in and sign-out for instant messaging services.

25. A method according to claim 14 wherein said step of communicating includes using said digital telephone set to change the on-line and off-line status of said digital telephone set for instant messaging.

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26. A method according to claim 14 wherein said step of communicating includes using said digital telephone set to query the status of a contact list member.
27. A method according to claim 14 wherein said step of communicating includes
5 determining the presence status of said digital telephone based on call activity of said digital telephone.
28. A method according to claim 14 wherein said step of communicating includes sending stored common replies to other instant messaging clients.
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29. A method according to claim 28 wherein at least one of said stored common replies includes at least one custom data field.
30. A method according to claim 14 wherein said step of communicating includes
15 sending stored common messages to other instant messaging clients.
31. A method according to claim 30 wherein at least one of said stored common messages includes at least one custom data field.
- 20 32. A method for performing instant messaging (IM) under a first protocol, said method comprising the steps of:
identifying a first device;
implementing a second protocol in a second device ;
converting between said first protocol and said second protocol;
25 registering said first device and said second device; and
mapping a first client to said first device and a second client to said second device.
33. The method of claim 32 wherein said first protocol is a Session Initiation
30 Protocol (SIP).
34. The method of claim 33 wherein said second protocol is a Computer Supported Telephony Application (CSTA).

35. The method of claim 34 wherein said first device is a first protocol device.
36. The method of claim 35 wherein said first device is a Personal Computer (PC).
- 5 37. The method of claim 34 wherein said second device is a digital telephone.
38. The method of claim 37 wherein said digital telephone is connected through a telephonic switch.
- 10 39. The method of claim 38 wherein said telephonic switch is a Private Branch Exchange (PBX).
40. The method of claim 34 wherein said first device is a second protocol device.
- 15 41. The method of claim 40 wherein said first device a digital telephone.
42. An apparatus for supporting Instant Messaging (IM) in digital telephones, comprising:
- 20 a register to register a first protocol digital telephone set;
a converter to convert said first protocol to a second protocol;
a map to map a client to said digital telephone set; and
a communication device to communicate an instant message to or from said digital telephone set.
- 25 43. The apparatus of claim 42 further comprising:
a register to register a second device; wherein said map further maps a second client to said second device and said communication device further communicates an instant message between said first digital telephone set and said second device.
- 30 44. The apparatus of claim 43 wherein said second device is a personal computer (PC); and wherein said map further maps a second client to said PC and said

communication device further communicates an instant message between said first digital telephone set and said PC.

45. The apparatus of claim 43 wherein said second device is a first protocol digital telephone set; and wherein said converter also converts said first protocol device to said second protocol device, said map further maps a second client to said second digital telephone set and said communication device further communicates an instant message between said first and said second digital telephone sets.

46. An apparatus according to claim 42 further comprising an Instant Messaging (IM) key configured to initiate instant messaging in a digital telephone set.